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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,628	04/04/2007	Yasuhiro Shindo	65656 (49227)	1973

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EXAMINER

FINK, BRIEANN R

ART UNIT	PAPER NUMBER
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1796

MAIL DATE	DELIVERY MODE
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11/05/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/582,628	Applicant(s) SHINDO ET AL.	
	Examiner Brieann R. Fink	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 16-22 is/are pending in the application.
- 4a) Of the above claim(s) 3, 9-12 and 18-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-8, 16 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/9/06 and 4/4/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 3, 11-12 and 18-22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on August 4, 2009.
2. Applicant's election without traverse of the species represented by the formula $(Q-(CONH)-G-NHCO-J)_m-CONH-G-NHCO-Y$ in the reply filed on August 4, 2009 is acknowledged and considered in the following rejections.

Specification

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

4. Claim 17 is objected to because of the following informalities: Claim 17 recites the word "ob**at**ined", which appears to be a misspelling of "ob**ta**ined". Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 4, and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by *Moller et al.* (US 6,159,556).

Moller et al. discloses an aqueous dispersion of a powder coating comprising a solid pulverulent component (A) and an aqueous component (B), in which (A) is an epoxide-containing binder with glycidyl-containing monomers and (B) is a nonionic thickener (a), which has a hydrophilic structure and hydrophobic groups (col. 2, ll. 1-28 and col. 4, ll. 5-13). The hydrophilic structures are polyetherpolyurethanes, prepared particularly preferably with unsubstituted or alkyl substituted 1,6-hexamethylene diisocyanate, which serves as the linking of the hydroxyl-terminated polyether units with one another and for the linking of the polyether units with the hydrophobic end group units, which may be monofunctional alcohols and/or amines having long chain aralkyl radicals, such as octylphenyl or nonylphenyl (col. 4, ll. 22-33).

As to claim 4, *Moller et al.* discloses the hydrophobic groups to comprise aralkyl radicals such as octylphenyl or nonylphenyl, which each have aromatic rings and carbon atoms in an amount between 6 and 100.

As to claims 16-17, *Moller et al.* discloses applying the dispersion to a basecoat followed by flash off and subsequently stoving (col. 5, ll. 60-61), resulting in a coat thickness of about 30-50 μm (col. 6, ll. 4-5). Note *Moller et al.* discloses that the aqueous dispersion may comprise a solvent (col. 5, ll. 19-21). Although *Moller et al.* does not use the same language as the instant invention, the process of flashing off and stoving appear to be the same as applicants' "desolvating" and "baking".

7. Claims 1-2, 4-8, and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by *Furuta et al.* (US 2003/0220444).

Furuta et al. discloses a water-dispersed slurry coating, comprising: (A) a particulate comprising (a1) a resin having an active hydrogen; (B) a reactive surfactant having at least one of an optionally blocked isocyanate group and an epoxy group; and (M) an aqueous medium in which (A) and (B) are contained (p. 1, [0010]). The surfactant (B) is further disclosed as comprising a hydrophobic moiety and a hydrophilic moiety (p. 1, [0013]).

As to claim 2, *Furuta et al.* discloses the slurry coating to preferably contain a curing agent (a2) (p. 6, [0098]).

As to claim 4, *Furuta et al.* discloses the hydrophobic moiety as having an aromatic ring-containing hydrocarbon group having 6 to 10 carbon atoms (p. 1, [0013]).

As to claim 5, *Furuta et al.* discloses the hydrophilic group of the surfactant as an oxyethylene unit, such as polyoxyethylene moiety, such that the content of oxyethylene unit is from 20-90% by weight of the surfactant (B) (p. 1, [0016]-[0017]).

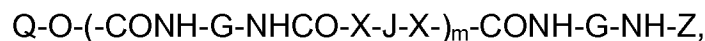
As to claim 6, *Furuta et al.* discloses all of the surfactants in Synthesis Examples 1-8 to have an average molecular weight of between 5,800 and 33,000 (p. 14-15); however, fails to disclose the weight average molecular weight of the polyoxyethylene chain. The components of the surfactant and reaction conditions to produce the surfactant of *Furuta et al.* appear to be the same as that of the instant invention, therefore, the weight average molecular weight of the polyoxyethylene chain of *Furuta et al.* is inherently the same as that required by the instant invention.

As to claims 7-8, *Furuta et al.* discloses the surfactant (B) as a urethane resin having at least one of an optionally blocked isocyanate group and an epoxy group comprising: (b3) an addition reaction product of (b1) a monohydric phenol or a monohydric aromatic alcohol and at least one of (b2) a vinyl monomer, or an alkylene oxide adduct of the addition reaction product; (b4) an organic diisocyanate; and (b5) at least one of a diol and a diamine each having a polyoxyalkylene chain; and optionally a chain terminating agent (p. 2, [0028]). *Furuta et al.* further discloses the chain terminating agent to include compounds such as ethanol, propanol, and butanol (p. 4, [0069]), which are the same as the

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blocking agents of the instant invention (see instant specification, p. 10, l. 2).

Furuta et al. discloses a preferable urethane resin as



where Q represents a residue of (b3), G represents a residue of (b4), X represents O or NH, J represents a residue of R5, Z represents a group represented by -CO-Y , wherein Y is -OR' , wherein R' is a monohydric alcohol residue, which is the same as the alcohol blocking agent of the instant invention, and m is an integer between 1 and 500.

As to claim 16, *Furuta et al.* discloses that the particulate (A0) can be obtained by a process in which a solvent solution of the resin (a1) is dispersed into water and desolvation of the solvent is carried out (p. 6, [0099]).

As to claim 17, *Furuta et al.* discloses applying the dispersion to an object and baking the coating to form a film on the object (p. 13, [0239]).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Furuta et al.* (US 2003/0220444), as applied above.

The reactive surfactant (B) taught by *Furuta et al.* anticipates claim 8, as noted above, as the formula of (B) is the same as that of the instant invention; however, in the chance that one of ordinary skill in the art would not find this anticipated, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the variable $m = 1-20$ as claimed in the instant invention, as it overlaps with the range of m taught by *Furuta et al.*, which teaches 1-500. It has been held that overlapping ranges are sufficient to establish *prima facie* obviousness. See MPEP 2144.05.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected from the overlapping portion of the range taught by the reference because overlapping ranges have been held to establish *prima facie* obviousness.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Briann R. Fink whose telephone number is (571)270-7344. The examiner can normally be reached on Monday through Friday, 7:00 AM to 4:30 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571)272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brieann R Fink/
Examiner, Art Unit 1796

/Randy Gulakowski/
Supervisory Patent Examiner, Art Unit 1796